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Notified in A.C.Is. 12th March, 1941

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General

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INSTRUCTIONS
REGARDING THE
DESTRUCTION OF
RATS AND MICE

1941

By Command of the Army Council,

I. J. G. 11

THE WAR OFFICE,
12th March, 1941

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INSTRUCTIONS REGARDING THE DESTRUCTION OF RATS AND MICE ON OR IN LAND AND BUILDINGS OCCUPIED BY THE WAR DEPARTMENT.

1. STATUTORY PROVISIONS.

Under Section 1 of the Rats and Mice (Destruction) Act, 1919, it is a statutory obligation upon the occupier of land or buildings to take such steps as may, from time to time, be necessary and reasonably practicable for the destruction of rats and mice on or in such land or buildings, and to prevent such land or buildings from becoming so infested. The local authorities responsible for the administration of the Act are County Councils, County and Metropolitan Borough Councils, Port Sanitary Authorities, and the City of London, and where powers have been delegated, Borough and District Councils.

2. DESCRIPTION AND HABIT OF RATS.

- (i) **Rattus Rattus**, the black rat, is small and slender, has large translucent ears and a slender tail, which is as long or longer than the head and body together. It is a climber and not a burrower and therefore is usually found in walls, ceilings or roofs. As it is found principally in ships and the precincts of ports, it is the one most concerned in the spread of plague.
- (ii) **Rattus Norvegicus**, the common brown rat, is larger and heavier, has small thick hairy ears and a stout tail, which is never as long as the head and body together. It is a burrower and a water lover. It lives near river banks and sewers and is less concerned in the spread of plague, but associates itself with man whenever and wherever possible.
- (iii) No reliance must be placed on the colour in the identification of rats, as the "black rat" may be distinctly brown, while the "common brown rat" may have an almost black coat.
- (iv) The staple food of rats is grain, but they will eat anything. They usually make their nests near their food supply and keep to definite paths or runs on their journeys.
- (v) Rats breed all the year round, but more commonly between January and June.

3. DAMAGE DONE BY RATS.

- (i) Rats are dependent on the food supplies that man prepares for himself and his domestic animals. They frequent dwelling houses, barns, granaries, poultry yards, slaughter houses, sewers and other places

where food supplies are stored, or waste is thrown away. They consume large quantities of foodstuffs and spoil more. Much damage is also done to buildings, floors, etc., from their power of gnawing holes and passageways. Damage is also caused to equipment.

- (ii) Rats suffer from bubonic plague, which may be conveyed by fleas from infected rats to human beings. Although plague is the most important disease acquired from rats, they may be the means of spreading epidemic jaundice, rat bite fever, dysentery, and other intestinal diseases, horse influenza, and trichina spiralis in pork.

4. PREVENTIVE MEASURES.

All steps possible will be taken to deprive the rat of food and shelter. Particular attention will be paid to the following points :—

(i) Food stores.

(a) Rooms having concrete floors should be used when practicable. When floors are of wood, care will be taken that they make a tight joint with the wall and that there are no cracks through which scraps can drop into the foundations.

(b) Metal bins will normally be used for storage of meals, grain and other foodstuffs.

(c) Where wooden bins are in use and there is evidence of attack by rats or mice, the receptacle should either be replaced by a metal bin, or should be covered with $\frac{3}{8}$ inch galvanised wire netting.

(ii) Refuse and waste food.

(a) Refuse will normally be placed in metal bins for removal by the contractor.

(b) When it is necessary to deposit refuse in dumps, care must be taken to ensure that waste foodstuffs are not mixed with the refuse and that the dumps are cleared regularly.

(c) To limit the probable sources of infestation, refuse will, when practicable, be deposited at a central point for removal by the contractor or other agent.

(d) Covered metal containers must be used for the storage of by-products of messing pending disposal.

(e) Waste foodstuffs which cannot be disposed of as by-products of messing in accordance with Army Council Instruction 185 of 1940, and for which there is no other use, must be destroyed.

(iii) Buildings generally.

(a) Drain pipes and ventilators must be properly protected and kept in good repair and all means of entry to the foundations closed.

(b) Holes through walls and floors for the passage of radiator pipes, water services, etc., must be well finished.

(c) Burrows under floors or in walls from which rats have been driven should be stopped with concrete. Broken glass should be incorporated in the concrete to prevent the rats opening up the concrete before it sets.

(d) Basement and low level windows must be kept in good repair.

(iv) **Precincts of Barracks or Camp, etc.**

(a) All herbage, particularly in hedgerows and on ditch banks, must be kept short so that burrows can be readily detected.

(b) The accumulation of junk and rubbish at places other than the central point referred to in paragraph 4

(ii) (c) must be prevented, if practicable.

(v) **Supply Depots and Unit Forage Barns.**

(a) The following items in sacks and crates which are vulnerable to attacks by rodents should be given special attention :—

Beans, butter and haricot
 Bran
 Cheese in crates
 Flour all grades
 Lentils
 Oats
 Peas, blue, maple, marrowfat
 Rice
 Rice cones
 Sugar

(b) Close stacking of the above items, which encourages the nesting of rodents, should be avoided where floor space makes this possible.

(c) Dunnage should be provided and the sacks should be stacked in rows, leaving alley ways where men can walk along to inspect the sacks.

(d) Depending on the dimensions of the sacks, the rows can be built double or treble the breadth of the sack, with the usual headers and stretchers.

(e) Daily inspection should be carried out and cats encouraged in the store.

(f) Cheese in crates should be stacked in rows in such a way as to facilitate turning periodically end over end. The cheese crates should be turned in temperate climates once a fortnight and the opportunity taken to inspect each cheese for damage as it is turned.

5. REMEDIAL MEASURES.

The destruction of rats must be systematic, rat campaigns being carried out in an area by all concerned working simultaneously in accordance with a pre-arranged plan. The choice of the means to be employed will depend upon the location, degree and source of infestation, and may consist of one or more of the following methods :—

(i) Poisoning.

(a) This will usually be found to be the most effective method in dealing with infestation in buildings. The first application of bait should be on a liberal scale. Baits should be laid in the late afternoon or evening. Areas baited should be inspected the following morning. If all the bait has been taken an equivalent quantity should be put down. Successive application should be made until some bait is left unconsumed. When this point is reached, any bait remaining should be removed and an interval of seven to ten days should be allowed before a second baiting is made. According to the results obtained on these two treatments subsequent baitings can be made at longer intervals, but while the infestation persists the longest interval between baitings should not be more than one month. It will frequently be found that rats and mice avoid obvious baits but will eat them if they are in old tins, boxes, etc., placed between sacks, or at the back of cupboards, furniture, etc., or in the empty boxes used for dunnage for stacks.

(b) The poisons which have been found to be effective are Red Squill Powder or Extract, Barium Carbonate, Phosphorus, and Zinc Phosphide.

(c) Precautions will be taken to prevent the eating of baits by domestic animals. If necessary, notices should be exhibited in places where baits are laid warning people to keep dogs or other animals away from the place.

(d) Rat poison will be supplied by the O. i/c. barracks as required on demand by units, etc. The poison at present supplied is Barium carbonate mixed with oatmeal to which a little aniseed has been added. This preparation should be used as follows :—

Three parts barium carbonate powder already mixed with oatmeal, as supplied by Supply Reserve Depots, to one part dripping. Melt the fat and mix into a thick paste. Lay out in pieces the size of a hazel nut. (This bait should not be used if there is a risk of contamination of food or of danger to domestic animals).

(e) The following recipes will also be found effective and are given for general information in the event of circumstances arising in which it is necessary to act without delay and a supply of the poison referred to in sub-paragraph (d) is not readily available :—

- (1) One part liquid extract of red squill and one part of boiled and cooled milk mixed with sufficient bread to make a thick paste. Lay out in pieces the size of a hazel nut.
(Parts in following recipes are by weight.)
- (2) One part red squill powder, two and a half parts fine oatmeal, one and a half parts dripping. Melt the fat and mix into a thick paste. Lay out in pieces the size of a hazel nut.
- (3) One part red squill powder, one and a half parts black treacle, half part water. Mix into a thick paste and spread on thin slices of bread in the form of sandwiches. Cut into half-inch squares.
- (4) One part barium carbonate powder, two parts rolled oats, one part dripping. Melt the fat and mix into a thick paste. Lay out in pieces the size of a hazel nut. This bait should not be used if there is risk of contamination of food or of danger to domestic animals.

It is frequently found that rats and mice are attracted by a new odour. Fish heads and tails finely minced, mixed with the barium carbonate bait often prove effective for a time. Cheese rind chopped and mixed with the bait also may prove effective. These should be tried in turn, as necessary. When used an equivalent reduction should be made in the weight of rolled oats in the mixture.

(ii) Gassing.

(a) This method may be used to secure a rapid initial clearance when the source of infestation lies in banks and hedgerows and other places in the open. Gassing will not, however, be used in dwelling houses, food-stores or places where animals are kept.

(b) The following are methods of gassing which may be employed :—

- (1) **Hydrocyanic acid gas.** A teaspoonful of a powder which gives off this gas on exposure to the moisture of the air or soil is inserted as far as possible into each rat hole to be treated, or the powder may be blown into the burrow by means of a pump or dust gun. The holes must

then be thoroughly blocked. Turf or earth must be stamped into the holes. Where the infestation spreads over a wide area all visible holes should be blocked by sods of earth some days before treatment is arranged; only those holes which have been re-opened in the interval need then be treated, thus reducing the quantity of the powder required to treat the area. The area should be carefully inspected daily after treatment in order that any holes which have been re-opened, or fresh holes made, may be promptly treated.

(2) **Sulphur dioxide gas.** This gas is obtained by burning sulphur and is most useful in exterminating rats if pumped into rat holes by means of a Clayton blower, the holes then being blocked and the area inspected as indicated at (1) above.

(c) The treatment referred to in sub-paragraph (b) (1) will usually be found to be the most appropriate for adoption on War Department property, the powder being inserted by the spooning method. There are two preparations either of which may be used for this treatment, viz: "Cyanogas" and "Cymag." Supplies will be obtained from O. i/c barracks, who should demand requirements monthly from A.D.S. (P) in the usual manner on A.F. F 726.

(iii) **Trapping.**

(a) This should be regarded as an auxiliary method to poisoning and gassing.

(b) The issue of rat-traps where considered necessary may be authorized by the G.O.C. in accordance with Preface, paragraph 8, to Barrack Schedules, 1937, Part I, and the Preface, paragraph 6, to War Accommodation Schedules, etc., 1939. Application for the numbers required should be made to the O. i/c barracks, giving details as to the necessity for the issue.

(c) Toasted cheese or fat bacon are suitable baits.

(iv) **Hunting.** Good ratting terriers will account for a large number of rats. The rats, which may be made to bolt from their burrows by the use of ferrets may then be killed by dogs or sticks. Where a localised heavy infestation exists, it is an advantage if the area can be surrounded with a 2 ft. high fence of $\frac{1}{2}$ inch wire netting or hessian so placed as to allow a 6 ft. runway round the location. Rats will bolt into the runway and can more easily be killed before they escape to find fresh quarters. No expense to the public can be admitted in connection with the adoption of this method.

6. MICE.

Where infestations of mice are encountered, trapping with break-back mouse traps, baited with toasted cheese or fat bacon will normally deal with the trouble. The poison baits referred to in paragraph 5 (i), (d) and (e) may also be used, cut into pieces about $\frac{1}{4}$ inch square. These methods may also be used for destroying voles.

7. RESPONSIBILITY OF Os. C. UNITS, ETC.

(a) The O.C. unit, etc., is responsible for ensuring that all necessary and practicable steps are taken, as indicated above, for the destruction of rats and mice on or in the land or buildings in the area occupied by his unit.

(b) An officer of the unit will be charged with the duties of ensuring that regular inspections are made of all premises and land with a view to the detection of the presence of rats and mice and of initiating and supervising the measures to be taken. His appointment will be notified in orders with an instruction that, whenever the presence of or damage by rats or mice is observed, a report is to be made to him at once.

(c) In order to ensure continuity of the work, records of the sources of infestation, action taken and results achieved will be maintained by the officer referred to in sub-paragraph (b). These records will be handed over to his successor, or to an in-coming unit. When the unit marches out and is not handing over to an in-coming unit, the records will be taken over by the O. i/c barracks, who will hand them to the unit to which the accommodation is eventually allotted.

(d) The sanitary personnel of the unit will be employed for the actual destruction work. Enquiry in the unit will usually reveal other men who have some knowledge of rat destruction.

(e) If, after all possible steps have been taken in accordance with the foregoing instructions, the O.C. finds that the area for which he is responsible cannot be effectively cleared of rats, or if the source of infestation lies in neighbouring property outside his control, he should consult with the local authority referred to in paragraph 1. No expense to the public, other than the cost of poison for baits, gassing powders and traps, will be incurred to carry out recommendations made by the local authorities, without the authority of the Major-General i/c Administration.



